UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,394	12/19/2001	Adityo Prakash	10006.000610	5415

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EXAMINER
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ART UNIT	PAPER NUMBER
2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Response to After Final Amendment

1.   The after final amendment was received on 3/23/09. Claims 2-4,6-10,15-20,23-42 are pending.

Response to Arguments

2.   Applicant's arguments filed 3/23/09 have been fully considered but they are not persuasive.

Applicants state that Lee 1 does not clearly teach an inverse of a gradient value. Upon further review, Lee 1 does broadly teach an inverse of a gradient value: Said "8" or 1/8 of the office action of 1/28/09 on page 5 and corresponding to table 1 of Lee 1 is **broadly** (emphasis added) of a gradient value since gradient values in fig. 8A are operated upon said 1/8 giving for example A/8 where A is a gradient or intensity or pixel value dived by 8. Thus, Lee 2 to cure Lee 1's deficiencies is not really needed. Note that the claims suggest 1/A; however, the claims have not clearly limited A as a denominator.

Applicants state that Lee 2 does not disclose wherein filter coefficients for an interpolation filter are scaled by an inverse of a gradient value. The examiner respectfully disagrees since Lee 2 **broadly** (emphasis added) filter coefficients (fig. 4B corresponding to fig. 2:70) for an interpolation filter (given that 4B in an averaging filter) are scaled (due to averaging) by an inverse (or denominator for averaging) of a gradient value (fig. 2:10 that will be averaged by the denominator).

Applicants state that the assertion by the examiner contradicts Lee 2. The examiner respectfully disagrees since Lee 2 teaches using mathematics in said equation (2)-(4) that reasonably includes coefficients, as known to one of ordinary skill in mathematics, operated upon in fig. 2:40 that dictates which filter to use. Thus, **broadly** (emphasis added) coefficients in equations (2)-(4) can reasonably be called filter coefficients.

Applicants state that the examiner supplies no explanation as to how a mean value and a standard deviation read upon the claimed filter coefficients. The examiner has **broadly** (emphasis added) concluded that any value used for multiplication is a coefficient. Thus, clearly equations (2)-(4) are performing multiplication, so coefficients exist such as the mean value and standard deviation that are multiplied. For example, $\sigma_n/m_n \ X \ T_g$ that can be expanded known to one of ordinary skill in math to $(\sigma_n) \ X(1/m_n) \ X \ (T_g)$ corresponding to equation 2 has three coefficients, σ_n and m_n and T_g, since each of σ_n and m_n and T_g is multiplied with one of σ_n and m_n and T_g.

Applicants state that mean values and standard deviations and local threshold values are different than filter coefficients. The examiner agrees that there can be a difference, but the claims have not clearly defined what filter coefficients are. The examiner has provided a broad interpretation of filter coefficients that read upon the claims and suggest clearly establishing a coefficient that is applied within a filter as Lee 2 shows in fig. 4B and 4C.

Applicants state that the examiner supplies no explanation as to how the local threshold in Lee 2 reads upon the claimed filter coefficients. The examiner has

interpreted the threshold to be a function of at least three coefficients as described

above. Thus, the threshold as a function of at least three coefficients dictates which filter

to use. So indirectly, coefficients are being used to select a filter. Again, the applicants

suggest that the coefficients directly appear within a filter to arrive at the claimed filter

coefficients; however, such a feature is not claimed.

Applicants state that equations (2)-(4) are applied by fig. 2:40 and not by the

average filter 70. The examiner respectfully disagrees since 70 needs or depends on 40

to properly operate. Thus, in effect equations (2)-(4) are applied by 70.

Applicants state that 70 does not apply to equations (2)-(4). The examiner

respectfully disagrees since 70 indirectly applies said (2)-(4) via 60 and 50 and 40 of fig.

1. Again, the examiner suggests further limiting the filter coefficients to be within a filter,

since clearly the coefficients of fig. 2:40 are not within fig. 2:70.

/Dennis Rosario/

Examiner, Art Unit 2624

/Matthew C Bella/

Supervisory Patent Examiner, Art Unit 2624